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UK National with full, clean driving licence

Mechanical and Electrical Engineer with strong foundations and experience in project management, automation, rapid prototyping and computational simulation of real world systems. Currently leveraging these skills to optimise on-farm seedling production, catering to diverse sectors of agriculture. Contributing by supplying both tooling and guidance on the implementation of best practices and well established management strategies. Actively engaged with industry bodies and advisory boards, particularly in urban and peri-urban agriculture.

### Education and Qualifications

**2016- 2018**                      **Nuffield Farming Trust Fellowship**  
NSch Fellowship By research  
Funded by the Richard Lawes Foundation  
ISBN: [978-1-912059-78-2](#)

**Overview:** Nuffield Farming Scholarships Trust awarded mentoring, connections and funding for a Ten week Global Focus Programme and a further Twelve week personal study travel. The GFP involved a round the world knowledge exchange trip with 8 high calibre agricultural practitioners and leaders, 10 countries and many farm visits. The Personal Study centred around Technology Adoption and Development strategies, what changes can we make in the UK to ensure technology is developed to solve today's needs of farmers and that it reaches the practitioners who need it in an affordable and prompt fashion, ensuring technologies are a part of leading positive changes in agriculture. Presenting the learnings to policy makers, government organisations and leading farming practitioners.

**2012- 2014**                      **Lancaster University, Lancaster**  
MSc by Research Mechanical Engineering  
Funded by the Sir John Fisher Foundation  
ISBN: [978-1-4673-6392-1](#)

**Overview:** This postgrad research project summarised the current state-of-the-art with respect to digital motor commutation techniques, progressed to propose and simulate a novel current control technique aimed at increasing efficiency under part load conditions. Heavily based around simulation, leading to a good base knowledge about how simulations are performed/implemented and provided a great opportunity to network with leading researchers from around the world. Work was presented and published at IEEE POWERENG international conference [Istanbul, Turkey].

**2009- 2012**                      **Lancaster University, Lancaster**  
BEng (Hons) Mechanical Engineering (2.1)  
(Accredited by the IMECHE)

**Primary Project:** "ARTEMIS PROJECT": A novel air-siphon power generation & environmental regeneration solution using lake Grevelingen (Holland) as a case study" Involves researching and assessing the viability of fish safe air siphon hydropower technology in a maritime environment.

**2007 – 2009**                      **Wigan & Leigh College**  
**National Diploma** in Mechanical Engineering treble grade:      **DISTINCTION-DISTINCTION- MERIT**  
**National Certificate** in Mechanical Engineering double grade: **MERIT- MERIT**

**Abraham Guest High School**  
Usual cluster of subjects, with grade's consisting of A's and B's.

### Memberships

Elemet14's Member of The Month: For exceptional projects and documentation.

- IMECHE
- IET
- AVF
- UKUAT
- Nuffield Farming
- Croft Discussions Group

## Key Skills and Competencies

### Computational skills

Along with being computer literate with respect to the usual Microsoft office and Google programs, also proficient in the use of:

- Solid-Works/Autocad
- MATLAB SimuLink
- Open AI assuage
- Linux
- Arduino IDE
- Integrating IOT on MCU's

### Technical skills and Competences

A busy personal life and strong academic achievements have strengthened many technical skills and competences, some noteworthy ones can summarised as such:

- Computational Simulation
- Automation, sensing and control
- Technical writing and presentation
- Electrical and Mechanical principles
- Mathematical practices and theory

### Teamwork, Leadership and Communication

Culturally sensitive and well travelled. Ability to identify attributes and strong personal traits suited to tasks and putting personal ego aside for the benefit of the team, taking the lead when necessary to give the team motivation, direction and conflict management. International research collaboration and professional leadership training honed the ability to present complex ideas and developed concise, technical writing skills and communicate well through written reports and publications.

Having benefited greatly from mentorship in the past, a strong commitment to paying it forward has driven active engagement in taking the role of mentor. This provides a personal sense of satisfaction and the exchange of ideas gives valuable insight into the views of the next generation.

## Projects

- Non contact Hydropower
- BLDC motor control
- Aquaponics automation
- Quadcopter noise reduction
- Feedback tuning
- Vision based sensing and control
- Implementation of lean production
- Six sigma implementation

## Career History

### Advisory Board Member [UKUAT, UK]

#### 2018-Current

Representing the UK's Urban agriculture sector's interest and providing a much needed link between the somewhat isolated urban agg sector and the larger agricultural sectors. Other roles include assessing potential upcoming tech for being over/under hyped and its usefulness to the sector.

### Engineer [Aquaponics-Lab, UK]

#### 2015 -Current

Initially main roles were centred around engineering, rapid prototyping of tech solutions for the aquaponics sector. Role within the company substantially changed over the years to take on more management based aspects, customer liaison, supply chain management during covid and advising/directing the company's direction into a more diverse set of offerings and wider set of clients/customers outside of the aquaponics sector.

### English Tutor [Beijing, People's Republic of China]

#### 2014-2015

Worked with students on a one to one basis, mainly to develop communication skills and prepare them for further education in western universities.

### Lab Assistant and Demonstrator [Lancaster University]

#### 2012- 2013

Lab assistant for modules of interest, working with students building knowledge and understanding needed to implement tasks presented in practical labs.

## References

Professional, Academic and Character references available upon request.